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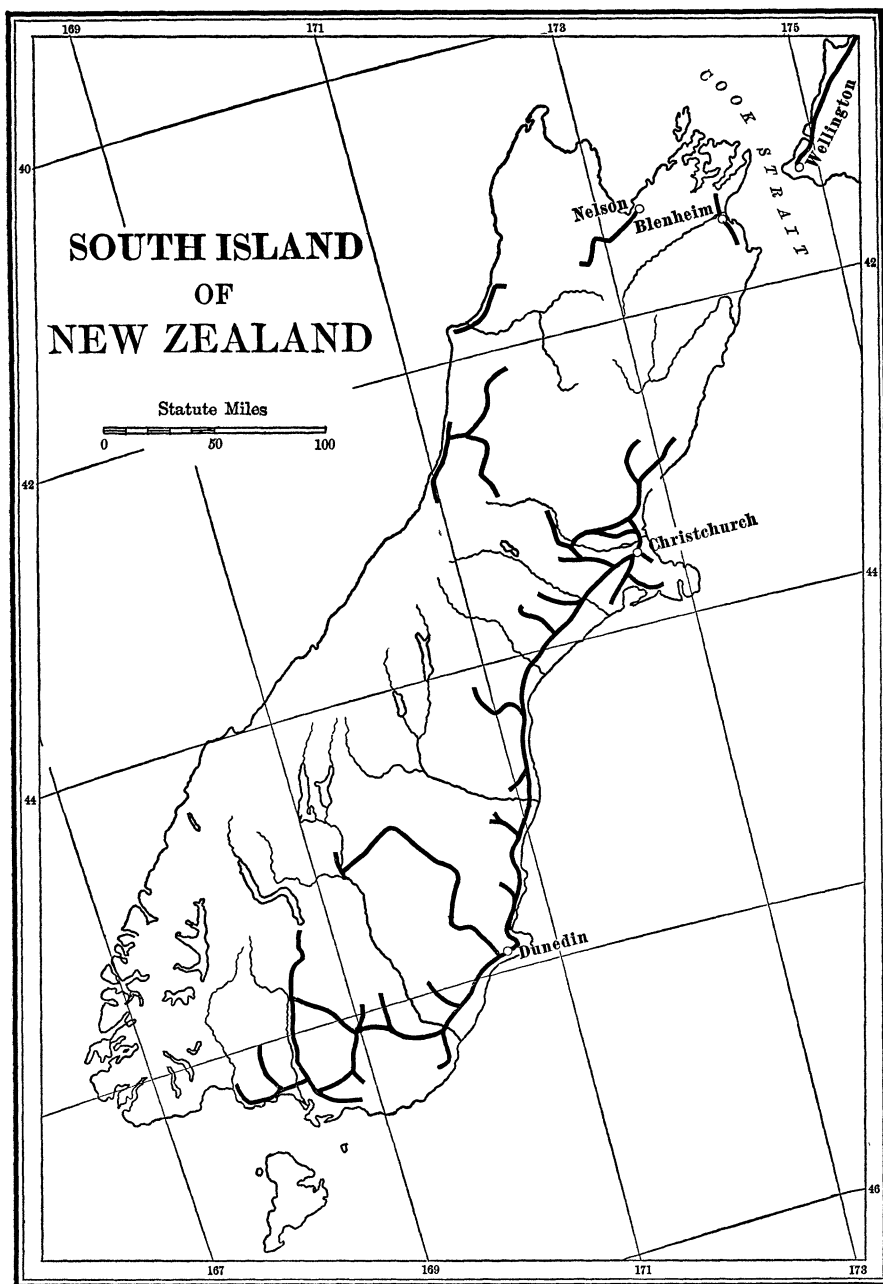
RAILWAYS IN NEW ZEALAND.¹

SUMMARY.

Early construction by provincial governments, 657.—Vogel's vast scheme of expansion in 1870, under general government, on borrowed money, 658.—Deviations from the original plan, through political influence, 660.—Expansion, followed by collapse in 1879, 661.—One important private railway, 662.—Bought up by government in 1908, 664.—The railways, narrow gauge and light, 666.—Traffic, rates, length of haul, 668.—Uniformity of rates, 670.—Commission administration, 1889–94, succeeded by direct governmental administration, 671.—Improvements charged to capital account, 672.—Net earnings insufficient to pay interest on debt, 673.—The deficit larger than the published figures indicate, 675.—Causes of the deficit, 678.—Railways should not be built or operated at financial loss because of supposed social utility, 685.—Recent movement for economy, 690.—Return to private ownership nowhere proposed, 692.

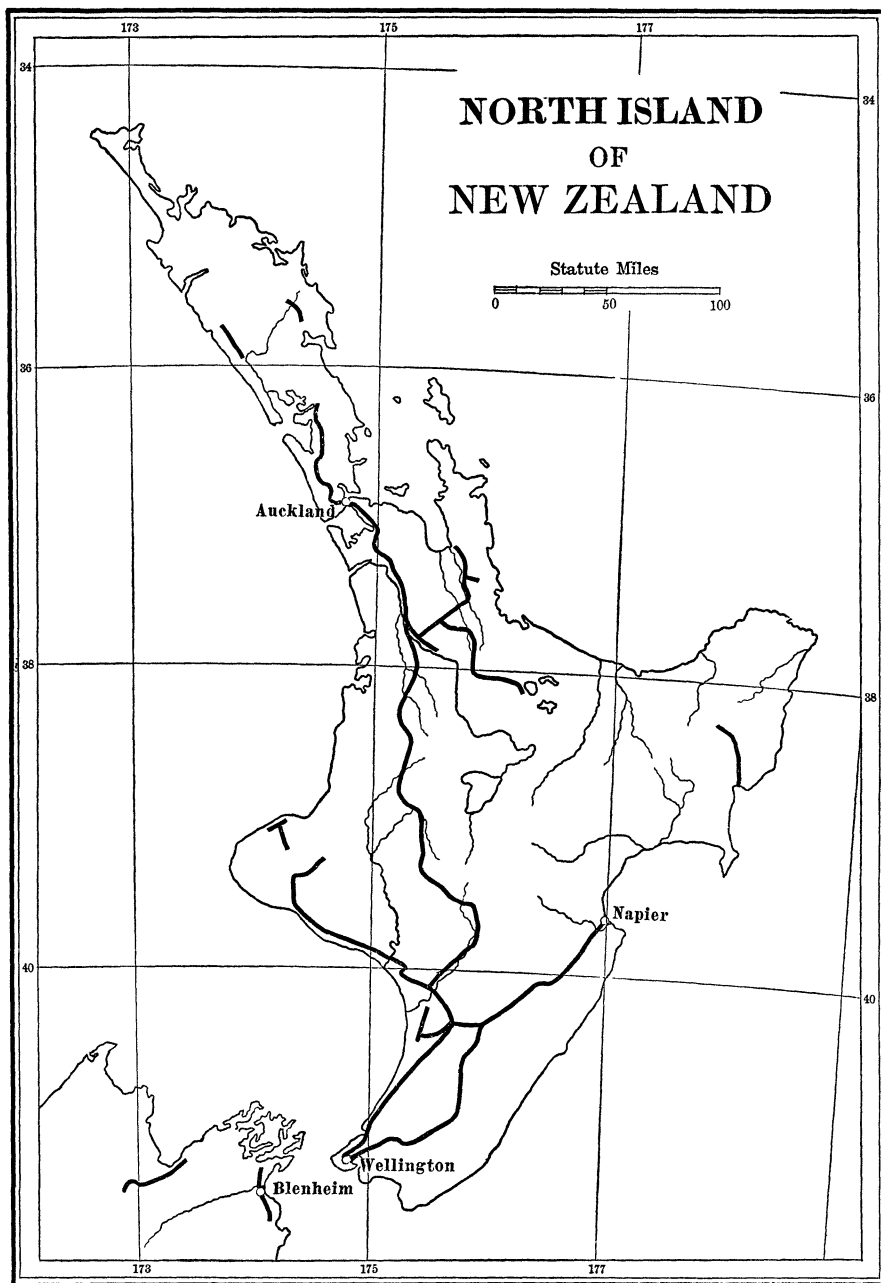
THE early European settlements in New Zealand, like those in America, were established on or near the sea-coast, with a rugged and almost inaccessible back country, into which the settlements gradually extended by means of roads. The numerous rivers, few of which were navigable, were a hindrance rather than a help to communication, particularly in time of flood, when bridges were carried away, fords rendered impassable, and even ferries were not to be relied upon. Because of the abundant rainfall, varying from twenty inches or less in the interior of Canterbury to one hundred inches or more in some parts of the west coast, ordinary unmetalled roads were quite useless for wheeled vehicles during many months of the year. People travelled on foot, on horseback, or by bullock sledges that moved along at a snail's pace through mud and mire. In remote parts of the Dominion these primitive conditions continue until the present day.

¹ The writers desire to thank Professor James Hight, of Canterbury College, who has been so kind as to read the MS before publication. They are indebted also to a number of other gentlemen for valuable information and suggestions.



SKETCH OF NEW ZEALAND RAILWAYS

PETERS ENGRS., BOSTON



SKETCH OF NEW ZEALAND RAILWAYS

PETERS, ENGEL BOSTON

"This may be God's own country," said a settler in one of the back blocks, "but we have the devil's own roads."

The early settlers fully realized their need of roads, and their leaders sought to provide funds for making them. Edward Gibbon Wakefield, the founder of the New Zealand Company, held that the company's land should be sold at a "sufficient" price, and that the revenue therefrom should be spent on immigration and public works, chiefly roads and bridges.¹ In the company's settlement of Wellington the price of land was fixed at £1 an acre. The Canterbury Association, which bought a large quantity of land from the company, at first sold it to settlers at £3 an acre, but the price was presently reduced to £2. From 1853 to 1873 the Province of Canterbury sold 1,101,583 acres of crown lands, for which it received £2,203,166, a large part of which was spent on roads and bridges. At first the making of roads was in the hands of the Provincial Council, but in the year 1863 road districts were created, governed by boards elected by the rate-payers, and having power to levy rates for the construction and maintenance of roads. But the Provincial Council continued to spend large sums of money on certain important works, and gave, besides, large grants to the road boards.²

The Province of Otago and all the other provinces adopted a similar policy, and were more or less active in the construction of roads, deriving their funds from taxation, as well as from the sale of crown lands, but in the year 1876 the provincial governments were abolished, and the crown lands were taken over by the general government. From this time the construction and maintenance of roads was chiefly in the hands of the road boards, counties, and other local governing bodies, but large subsidies were granted them by the general government,

¹ Reeves, *State Experiments*, vol. i., chap. 6.

² *Handbook of 1875*, article by W. M. Maskell.

which also carried on important works of its own for the opening of new districts and the improvement of those already settled. From the year 1870 to March 31, 1908, the sum of £7,861,467 was expended on roads out of the Public Works Fund, and doubtless a far greater sum was spent by the various local governing bodies. Probably not less than £25,000,000 has been spent upon roads and bridges from the beginning of the colony until the present time. A large part of this amount has been procured by loans, the general government alone having borrowed over £6,000,000 for this purpose; another large part has come from the sale or leasing of crown lands; and a third part, also large, has been derived from taxation. That the development resulting from this expenditure has many times repaid the outlay is sufficiently shown by the fact that the unimproved value of land in the year 1908 was estimated at £161,324,763. Whether the benefits derived from this expenditure have been properly distributed among the people of New Zealand is another question.

The activity of the provincial governments in the building of roads was obviously due to their control over the crown lands, as well as to the fact that the settlers had not capital sufficient for enterprises of such magnitude. For the same reason, when railways were projected, the people naturally expected the provincial governments to provide the money, either from the sale of crown lands or from loans effected in England on the security of the public credit, which was largely dependent on the value of lands, public and private. Private companies, perhaps, might have been formed if the provinces had been willing to guarantee their debentures or to make large grants of public land; but there was no large supply of private capital in the colony, and no attractions sufficient to induce British capitalists to engage in what must have seemed to them small and unpromising enterprises.

The first railway in New Zealand was undertaken by the provincial government of Canterbury in the year 1860 for the purpose of connecting the town of Christchurch with the port of Lyttelton, from which it was separated by a high range of hills. At this time the total population of the colony, exclusive of Maoris, was barely 80,000, while the population of Canterbury was not over 20,000. The opening of the first part of the line, between Christchurch and Ferrymead Junction, on the Heathcote River, was celebrated with great rejoicing on December 1, 1863, and the great tunnel, a mile and a half in length, was opened on December 1, 1867. It was an important work, connecting the capital city and the interior of the province with the magnificent harbor of Lyttelton, and without it the development of the province would have been retarded for many years. A little later the province built another line, running southward from Christchurch to the Selwyn River.¹

In 1863 the Provincial Council of Auckland began the construction of a line between Auckland and Drury, chiefly for the purpose of subduing the Maoris in the Waikato, but with the idea of ultimately completing a main trunk line to Wellington. In the same year the Provincial Council of Southland (reunited to Otago in 1870), obtained from Parliament an act authorizing the construction of the Bluff Harbor and Invercargill Railway, which was opened on February 5, 1867. To this period belongs also the Dunedin and Port Chalmers Railway, constructed by private capital under the guarantee of the Otago Provincial Council. All of these railways together were only 46 miles in length of open line in 1870, when Vogel's celebrated public works policy was promulgated. In 1872 there were only 65 miles of provincial railways; in 1875 there were only 70 miles open; and when, in 1876, the provincial governments

¹ Handbook of 1892, article by E. G. Pilcher.

were abolished and their public works were taken over by the general government the total amount spent by them on railways, including the cost of the Dunedin and Port Chalmers line, was estimated at £1,104,281, part of which was debt, and was assumed by the general government.¹

From 1860 to 1870 the European population of New Zealand was trebled, increasing from 80,000 to 250,000, notwithstanding the almost total lack of railways. But people began to feel more and more their need in this regard. The provinces had made a good beginning, but there was no prospect of the rapid growth of their railway systems. In fact, there was no system at all, but only a few disconnected spurs issuing from the chief towns. There was a difference, too, in the gauge, Canterbury having adopted the Irish gauge of 5 feet, 6 inches, Otago and Auckland the standard English gauge of 4 feet, 8½ inches, while the government, following the advice of Robert Stephenson, recommended a gauge of 5 feet, 6 inches, but afterwards adopted 3 feet, 6 inches, as the uniform gauge for the whole colony. If the provinces had gone on with their work, it is probable that there would have been two, if not three, different gauges, with all the resulting inconvenience and loss which Australia has suffered from this cause. But the provinces, with their limited resources, could not command the capital necessary for extensive construction. It was obviously a matter for the general government to take up. The time had come for a forward movement, and it was at this favorable time that Mr. (afterwards Sir) Julius Vogel, the colonial treasurer, proposed his remarkable scheme of colonial development.

Altho the population of the colony in 1870 was only 250,000, Vogel, who was a born gambler as well as a far-seeing statesman, proposed to borrow within the next ten

¹ Handbook of 1875, article by John Knowles; Year Book of 1908, p. 579.

years the enormous sum of £10,000,000, to be expended in specified proportions on immigration, railways, roads, purchase of native lands, water races for the gold fields, and extension of telegraph works.¹ As a matter of fact, twice the proposed amount was borrowed, for the public debt within the next ten years increased from £7,841,891 to £28,185,711, while the population increased from 250,000 to 500,000, so that there was an increase in debt per capita from £32 (\$155) to £56 (\$272). The debt would not have been so great if Parliament had accepted the whole of Vogel's plan, for he suggested with great wisdom that the crown lands be so administered, by lease or sale, as to pay a large part of the cost of the roads and railways, and that a special tax be levied on the owners of lands specially benefited.² But provincial and local influence was too strong for Vogel. Parliament, after a great debate, almost unanimously agreed to the alluring proposals involving the borrowing and spending of vast sums of money, but rejected measures which were designed to operate as a check upon excessive borrowing, and would have compelled the land-owners to bear part, at least, of the burden they were so eager to shift to the shoulders of a future generation. It was no mere coincidence that Parliament was at that time largely composed of landholders, among whom the large sheep-raisers of the South Island exercised a dominating influence. The Immigration and Public Works Act of 1870 and cognate acts were passed, and the colony entered upon a rapid career of borrowing, expenditure, and internal development.

The government had a comprehensive plan of railway construction, involving the completion and extension of lines already begun, so as to make ultimately two main

¹ Handbook of 1875, article by John Knowles; Handbook of 1892, article by E. G. Pileher.

² Reeves, *New Zealand, in The Story of Empire Series*, p. 144; Parsons, *The Story of New Zealand*, chap. 18.

trunk lines running the length of both islands, with feeders into the interior wherever a profitable traffic could be developed. But the pressure of local influence was so great as to compel many deviations from the original plan. In some districts railways were built far in advance of requirements, while in others the people waited long for lines that might have been made to pay. Sir Julius Vogel desired and expected the railways to pay at least the cost of maintenance and interest on the borrowed capital (about $5\frac{1}{2}$ per cent.), but from every part of the colony arose a clamor for a "fair share" in the public expenditure, and the appropriations were doled out to more than thirty different districts, with undue regard to political influence.¹ No doubt the districts having the greatest political influence were, as a rule, the most populous, but not necessarily the most promising or in greatest need of development. To such perversions of the original plan may be traced much of the financial failure in railway administration from the beginning until the present time.

The government was active in the building of railways from 1873 to 1877. In the former year there were, in all, 145 miles of open line and 434 miles under construction. In 1877 there were 1,052 miles of open line and only 251 miles under construction.² These were narrow-gauge lines, with severe gradients and sharp curves, light rails and cheap bridges, "designed with a view to the early production of revenue, and at some sacrifice of convenience in travelling and in working."³ Most of these lines were built by contractors, at a cost of about £7,000 per mile.

The development of the colony which followed the inauguration of the Public Works Policy was considerable, but not so substantial as many have thought. The popu-

¹ Handbook of 1875, article from the *New Zealand Times*.

² Handbook of 1879, by James Hector, p. 81.

³ Handbook of 1892, article by E. G. Pileher.

lation increased by 74 per cent. in the eight years between 1871 and 1879. In the previous eight years it had increased by 62 per cent. The value of the exports did not increase much, perhaps because of the world-wide industrial depression of those years. The value of the imports increased at first, but afterwards fell. There was a great excess of imports from 1872 to 1886, and after that year a large excess of exports.¹ The value of land, especially those lands opened up by the railways, increased enormously. Sir James Hector says, "Hundreds of thousands of acres, worth, before the advent of railways, from £1 to £3 an acre, were afterwards sold at prices ranging from £10 to £20 per acre."² Strange to say, the provincial governments, and, after 1876, the general government, did not raise the selling price of crown lands to correspond with their enhanced market value. The Province of Canterbury, for example, continued to sell land at the old price of £2 an acre, altho immediately after the sale much of it was worth several times that amount.³ A violent land fever or "boom" ensued, which collapsed in 1879, and from which the colony did not recover for many years. Mr. Reeves says: "The boom burst amid much suffering and repentance. In some districts three-fourths of the prominent colonists were ruined, for the price of agricultural produce continued, on the whole, to fall relentlessly year after year until 1894."⁴ Mr. Reeves also says: "It was not the public borrowing of the colony, but the private debts of the colonists, which, following the extraordinary fall in the prices of their raw products between 1873 and 1895, plunged so many thousands into disaster. . . . New Zealand is now a pleasant and highly civilised country. That she

¹ Fifty Years' Progress in New Zealand; Year Book of 1908, p. 626.

² Handbook of 1879, p. 80.

³ Parsons, Story of New Zealand, chap. 18; Reeves, The Long White Cloud, pp. 325-331.

⁴ New Zealand, p. 148.

has become so in the last thirty years is due chiefly to the much criticised public works policy."¹

While this is partially correct, and the crisis of 1879 was only the inevitable culmination of a period of development and inflation that began as early as 1860, it is certain that the vast and rapid expenditure of borrowed money by the government acted as a powerful stimulant to private speculation and borrowing at a time when retrenchment should have been the order of the day, and, while it postponed the coming crisis, greatly increased its violence when it did come. Besides, the unwise distribution of public expenditure, especially in the building of unprofitable railways, tended to limit the power to borrow later on for profitable investments, and thus retarded the development of the country. In the four years from 1873 to 1877, 907 miles of railway were completed, making an average of 251 miles a year. In the ten years following only 701 miles were built, in the next ten years only 304 miles, and in the ten years ending March 31, 1908, which were years of great prosperity, only 416 miles were completed, not because the colony had all the needed railways, nor because none of the projected lines could be made to pay, but chiefly because of the inability of the government to borrow adequate sums; and this may be traced to the unprofitable character of the lines already built.

The activity of the government in railway construction, and the unwillingness of the people to give concessions to private syndicates, effectually prevented private capital from engaging in railway enterprises. The Wellington and Manawatu Railway Company is a notable exception to this rule. In the year 1878 the Grey government, after careful surveys, decided to build a line between Wellington and Foxton, as an important part

¹ New Zealand. p 150

of the line between Wellington and New Plymouth on the way to Auckland. After about £30,000 had been spent, the work was discontinued, and a royal commission in 1880 reported against the line. Thereupon some enterprising citizens of Wellington took the matter up, and, being assured by the premier, the Hon. John Hall, that the government had no money to carry on the work, but would grant concessions, they formed a company in 1881. The initial subscribed capital was £50,000, afterwards increased to £850,000, of which £170,000 was paid up stock and £680,000 was in debentures bearing interest at 5 per cent. The work was vigorously prosecuted, and the line between Wellington and Longburn, $84\frac{1}{4}$ miles in length, was formally opened by the governor of the colony, Sir William Jervois, on November 3, 1886. By "The Railways Construction Act, 1881," Parliament made a grant of land to the company to the extent of 30 per cent. of the cost of construction, provided that this cost did not exceed £5,000 per mile. The value of land receivable under this contract amounted to £126,375. Through neglect of the government the company received land of the value of only £101,909, about 215,000 acres, some of very poor quality. It is interesting to note that the company's first issue of debentures was effected in England through Sir Julius Vogel, who acted as the first London agent of the company.¹

The Wellington and Manawatu Railway Company has been very successful. It opened up a fine pastoral country tributary to Wellington, and sold its lands at good prices. It gave a service that compared favorably with that of the Government, and at the same rates. It diverted a good deal of traffic from the Government's line, which

¹ Annual Report of the Wellington and Manawatu Railway Company, 1906; Year Book of 1895, pp. 381 to 384

reached Wellington by a detour of 134 miles in place of 84 miles by the Manawatu. In fact, the Government's express trains between Wellington and New Plymouth were obliged to pass over the Manawatu line. From the beginning the company has paid interest at 5 per cent. on its debentures. The first dividend, of $3\frac{1}{2}$ per cent., was paid in 1891. For the two succeeding years 5 per cent. was paid, after which the dividend was 6 per cent., and latterly 7 per cent. The company also paid for all additions and improvements out of revenue, and up to 1906 had written off the sum of £202,086 on account of railway and rolling stock. From the beginning until the year 1906 the company had paid £118,550 in general and local taxes, being nearly 20 per cent. more than the original value of the land grant. The value of governmental and private lands in the district served by the railway has greatly increased, and the company claims to have been the chief cause of the creation of this "unearned increment."

For a long time the Manawatu Railway has been a thorn in the flesh to the Railways Department, and the Government has been incessantly urged to purchase the line, in accordance with the provisions of the Act of 1881, and thus complete the railway system. For lack of funds the Government has delayed doing this, but negotiations have been at last completed, and, after twelve months' notice required by the act, the Government acquired the line on December 7, 1908, the purchase price being £900,000, with additional compensation for stores and certain minor assets, the total amount paid not to exceed £930,000. This was enough to pay off the debentures and to give the shareholders something more than the market value of their shares (£2 8s. 6d.). On May 13, 1909, it was announced that they would probably receive £3 per share. The venture has proved

a good investment for the shareholders, and the government expects to make a profit on the transaction. The net earnings of the line, about £60,000, if maintained, will be sufficient to pay £40,000, the estimated interest at 4 per cent. on the new debt of £1,000,000, and to leave an annual surplus of something like £20,000. However, from this apparent surplus should be deducted over £5,000 lost in general and local taxes, besides a still larger amount spent by the company on maintenance and other general charges. Also the company had a revenue from the sale of lands, amounting to £11,388 in 1906 and £18,148 in 1908, the price received for 34,559 acres, the last of the country lands. This revenue the Government will not have, and, when all the items are deducted, the apparent surplus is reduced to very little and may be transformed into a loss, unless there is an increase in net earnings because of the rounding out of the system and the elimination of a formidable competitor.

The only other private railway of any importance was the New Zealand Midland Railway, owned by an English syndicate formed in 1886 for the purpose of building a line from Springfield in Canterbury to Brunnerton in Westland, by way of the Otira Gorge, and thence on to Nelson, a total distance of 235 miles, to complete the main trunk line of the South Island. It was a land-grant railway, and under the contract of 1888 the company was to receive 10s. worth of land along the line for every £1 spent in construction. It is stated that the government did not abide by its contract, but forced the company to sell upon unfair terms. The railway was taken over by the government on May 27, 1895, after 79 miles had been constructed at a cost of about £1,300,000.¹ The government has not yet completed

¹ Year Book of 1894, article by Norman H M Dalston, acting general manager; Year Book of 1896, p. 185; Year Book of 1895, p. 381.

the railway as originally planned, so that Nelson and Westland are still isolated, having no railway connection with the main lines of the South Island. At the present time there are only 29 miles of private railways in New Zealand, while 2,555 miles of line are owned and operated by the government.

Comparisons of railways in different countries are interesting, but often misleading. New Zealand has 2.4 miles of railway for every 100 square miles of territory; New South Wales, 1.1 miles; Victoria, 3.8 miles; Queensland, .47 mile; Argentina, 1.1 miles; Canada, .6 mile; the United States, 7.7 miles; Nebraska, 7.7 miles; Colorado, 5.1 miles. New Zealand is better supplied with transportation facilities than these figures indicate, for most of the large towns are on the coast, and have the benefit of transportation by sea. No part of New Zealand is as much as 100 miles from the sea, so that places that have no railways at all, but have fairly good roads, are not altogether isolated. On the whole, railway development has followed a pretty well-defined plan, and there are few parallel lines. The main trunk line between Auckland and Wellington, after years of delay, has been completed, and was formally opened on November 5 and 6, 1908. The main trunk line of the South Island is still far from completion. Travellers southward bound from Wellington take ship to Lyttelton, a distance of 175 miles, whence they can go by rail, following closely the coast line to the Bluff, at the southern end of the island. There are still a number of isolated bits of line, beginning at some seaport and ending at some small country station. Spurs run out at intervals from the main line, sometimes into a rich and populous district, sometimes into a thinly settled pastoral country, where little traffic can be developed.

The narrow gauge of 3 feet, 6 inches, prevails throughout. Originally, the railways were built with sharp curves,

steep grades, light thirty or forty pound rails, little or no ballasting, temporary bridges, small-sized rolling stock, and very inadequate terminal facilities. Gradually, the system has been improved, and at considerable expense. The railway stations at Auckland and Wellington are still very poor, but Christchurch has a good building, and the new station at Dunedin, recently built at a cost of about £46,000, is excellent. The first-class carriages compare favorably with cars of the same class in the United States. Second-class accommodation is poor. In winter the carriages are partially heated by warming-pans. Until recently there were no night trains, and, therefore, no sleeping-cars; but, since the opening of the main trunk line, sleeping accommodation has been provided between Wellington and Auckland. There are dining-cars on the principal lines, where one can obtain a fairly good meal for 2s.

On most of the branch lines the service is infrequent, seldom exceeding one train a day each way. There are two trains a day each way between Christchurch and Dunedin. For shorter distances, on the main lines, the service is more frequent. The large towns have good suburban service. The speed of trains is not great, particularly in hilly districts. Ordinary trains travel from ten to seventeen miles an hour; express trains, from seventeen to twenty-five miles an hour. The trains are generally on time. Accidents are relatively fewer than in the United States. In the year ending March 31, 1908, the number of employees killed was 6, being 1 in 2,056, and the number injured was 616, or 1 in 20. In the same year 8 passengers were killed, being 1 in 1,219,589 of ordinary passengers carried, and 12 passengers were injured, or 1 in 813,059.¹ In the United States, in the year ending June 30, 1906, 3,929 employees were killed, or 1 in 387; 359 passengers

¹ Railway Statement, 1908

were killed, or 1 in 2,222,691; 76,701 employees were injured, or 1 in 20; and 10,764 passengers were injured, or 1 in 74,131.¹

Passenger traffic is relatively large in New Zealand, yielding 33 per cent. of the total revenue as compared with 22 per cent. in the United States. It is difficult to make a comparison of fares, for there are no available statistics giving the average revenue per passenger-mile. Ordinary first-class fares average about $1\frac{1}{2}d.$ (3 cents) per mile, and second-class fares about $1d.$ (2 cents), and they are the same in every part of the system. The fares for return tickets are usually double those for single tickets. About 80 per cent. of the passengers travel second-class. There are special excursion fares for schools, factories, and friendly societies, season tickets for suburban residents and school-children, weekly workmen's tickets, special rates for tourists, and minor concessions, all of which tend to reduce the average fare. It seems probable that the average fare per passenger-mile is slightly under $1d.$ (2 cents), and, therefore, very close to the average of the United States (2.014 cents).

The railways statement does not give the average charge per ton-mile, but it may be approximately deduced by comparing the figures for 1907-08 with those of 1894-95. The commissioners in that year gave the average revenue per ton-mile as $2.04d.$ (4.08 cents), and the revenue per ton of freight carried as $79.6d.$ (\$1.59). In the year 1907-08 the revenue per ton of freight carried was $78.5d.$ (\$1.57), and, since there is no reason to think that the average length of the haul is much greater than it was in 1895 (*ca.* 40 miles), it is safe to say that the average charge per ton-mile is not much less than $2d.$ (4 cents), and certainly not less than $1.75d.$ (3.5 cents), making due allowance for the tonnage equivalent of the live

¹ Report of Interstate Commerce Commission, 1906.

stock carried. The ton, however, is the long ton of 2,240 pounds. In the United States, in the year 1906-07, the average revenue per ton of freight per mile was .759 cent (.379*d.*).

The system of tapering rates, involving progressively lower rates for increasing distances, is applied throughout. Goods in Class F, when shipped by the truck-load, are carried at the lowest classified rates, at a charge of .72*d.* (1.44 cents) per ton-mile for a distance of 100 miles, and .94*d.* (1.98 cents) per ton-mile for a distance of 50 miles. Goods in the next higher class, Q, are charged 1.3*d.* (2.6 cents) per ton-mile for a haul of 50 miles. Lime for fertilizing, under specified conditions, is carried free for a distance of 100 miles, but forms an insignificant part of the total freight. The rates on grain in bags are 1.16*d.* (2.32 cents) per ton-mile for 100 miles, and 1.62*d.* (3.24 cents) for a distance of 50 miles. The 50-mile rate on bituminous coal and anthracite is 1.8*d.* (3.6 cents) per ton-mile. On brown coal it is 1.3*d.* (2.6 cents). Wool in bales is carried 50 miles at a rate of 4.6*d.* (9.2 cents). Goods in Class A, including furniture, sewing-machines, fancy goods, dried fruit, glassware, spirits, sugar, and a great variety of articles of general merchandise, are carried 50 miles at a rate of 7.56*d.* (15.12 cents) per ton-mile. Rates for goods in classes B, C, and D, also, are high, being, respectively, 6.44*d.* (12.98 cents), 5.5*d.* (11 cents), and 4.18*d.* (8.36 cents) per ton-mile for a haul of 50 miles. To all of these rates must be added extra charges, when loading and unloading are done by the department. It should be noted also that most of the freight is shipped at the owner's risk.¹

The average length of haul is probably only slightly over 40 miles, and this is one of the chief reasons why freight rates are so high, and why it is not fair to com-

¹ Passenger Fares and Coaching and Goods Rates, 1904 and 1907.

pare them with average rates in the United States, which are brought down by low charges on long-distance shipments of grain, cattle, cotton, coal, lumber, fruit, and other staple commodities. A comparison of short-distance rates would not be so unfavorable to New Zealand. Besides, the volume of business is less in New Zealand, so that the average cost to the department per ton of freight shipped is relatively high.

Both freight and passenger rates are uniform throughout the Dominion, irrespective of density of traffic. The Railways Department is no respecter of persons or places. The rates on small, disconnected lines are the same as those on the main trunk lines, and the smallest wayside station pays no more than the largest city. Beyond the published rates for carload lots, as in Class F, the largest shippers get no advantage, and there are no secret discriminations. Doubtless a system of differential rating designed to favor populous districts would prove profitable, but it would cause more discussion and criticism than any administration could stand. While making some special concessions to certain localities and for the benefit of certain industries, as timber and coal, the Department, for the most part, has taken refuge in an almost inflexible system of rates, and, instead of modifying the rates in accordance with the conditions and changes of business, has compelled business to accommodate itself to the established rates, regardless of special circumstances and special needs.

After the inauguration of the Immigration and Public Works Policy of 1870 the colonial secretary acted for a time as minister of immigration and public works. Later a special minister was appointed, and in 1872 two departments were created, and the state railways were placed under the control of the minister of public works¹.

¹ Handbook of 1875, article by John Knowles.

From the beginning the railways were run at a loss, and there was much criticism of their administration. Hence, by the Government Railways Act, 1887, they were placed in the hands of a board of commissioners, three in number, appointed for five years or during good behavior, who were expected to introduce business methods and to extinguish the deficit. The commissioners had control from January 28, 1889, to December 31, 1894, and succeeded fairly well in their attempt to place the railways upon a sound financial basis. They made themselves to a large extent independent of politics, practised unpopular economies, refused demands for concessions on every hand, and made so many enemies that, after six years of struggle, the clamor against them was so great that the commission was abolished. It is the common belief to this day, quite contrary to fact, that their administration was an egregious failure. Their greatest virtues were, in the public mind, their most heinous crimes. The commissioners were accused of being irresponsible and despotic, of caring only for their salaries, charging exorbitant rates in some cases, and in others competing unfairly with steamship companies, tram-cars and coaches, opposed to reform in administration, and, in general, of being out of touch with the people and disinclined to foster industry and encourage internal development. The proposal to abolish the commission was made an issue in the election of 1893, and after the return to power of the Seddon government the Government Railways Act, 1894, was passed. It placed the railways in the hands of the Railways Department, now separate from the Public Works Department, and this form of administration has continued until the present time.

The Public Works Department builds the railways; the Railways Department operates them. The Railways

Department is doubtless in closer touch with the public than the commissioners were or desired to be. The immediate control is in the hands of the general manager, but the power and responsibility belong to the minister, who is a member of the cabinet and has a seat in Parliament.

Since the year 1894-95 only 478 miles of line have been constructed, but much has been done in the way of improving existing lines by strengthening the road-bed, ballasting, building stronger bridges, laying heavier rails, adding more powerful engines and larger rolling stock, with Westinghouse brakes and other improvements, erecting new station buildings, double-tracking certain lines, introducing signals and interlocking systems, together with minor improvements and additions. Most of these improvements have been made with borrowed money, since the net revenues have not been sufficient to pay even interest on the capital cost. The money for such improvements must either be borrowed or paid out of taxes, for the improvements are required to keep pace with the development of the railway business. The vexed question as to charging "additions to open lines" to capital or to revenue is a question of correct accounting. If the maintenance account is sufficiently large, so that there is no depreciation, and if the improvements involve real additions to capital value, there can be no doubt that they may properly be charged to capital. It is stated that the department is particular about this matter, and when, for example, a new station replaces an old one, the cost of replacing the station as it was before is charged to maintenance, while the additional cost of the better building is charged to capital. On the other hand, the entire cost of new rails is charged to revenue. Most of the money, however, is spent for new rolling stock. Out of a total of £333,386 the sum of £243,261

was thus expended. As old rolling stock is discarded, it is written off and replaced out of revenue. A committee appointed by the Auckland Chamber of Commerce to investigate this matter reported as follows: "We are of opinion that a very substantial amount of such additions should be placed to capital account."¹ There was no account of additions to open lines under the commissioners.

Another argument in favor of charging to capital the cost of betterments is that it is desirable to show in the accounts the exact capital cost of the railways, which would not be done if expenditures beyond a reasonable maintenance were charged to revenue. Had additions to open lines since 1895 been charged to revenue, the capital cost of the open lines would now appear to be something like £20,000,000 instead of £24,000,000, and the Department would seem to be earning a higher per cent. of net revenue than it actually earns. In fact, the sum of £24,365,647, given in the accounts, is not the full cost of the railway system to the people of New Zealand. To this should be added £2,369,493, the cost of lines not yet (March 31, 1908) open, making £26,735,140 as the total capital cost upon which interest should be reckoned. But the railways have cost far more than this. Since the beginning there has always been a large sum invested in unopened lines, upon which interest had to be paid, and this must have amounted to several millions of pounds in the past thirty-eight years. There should also be added the yearly deficits, amounting to £4,256,025 since 1882, and an unknown sum before that time. If the total expenditure were reckoned from 1870 to the present time, it would be seen that New Zealand has actually paid for her railway system, in borrowed money and in taxes, not less than £35,000,000. Of this amount only £21,271,000 was paid out of borrowed

¹ *The Herald*, February 14, 1908.

money, and forms part of the public debt.¹ The additional cost of the railways has been paid from other sources, partly from land sales, but chiefly from taxes, direct and indirect.

Since the year 1895 the capital cost of the open lines has increased from £7,703 to £9,861 per mile of open line, largely because of the improvements above mentioned, but also because of the more difficult construction and superior character of the new lines, particularly the recently completed main trunk line. This cost seems high for a narrow-gauge road, and considerably exceeds the cost of railways of the same gauge in Queensland, Western Australia, South Australia, and Tasmania. It is about the same as the cost of the railways of the Cape of Good Hope, but much less than that of the Natal railways, which cost £15,296 per mile.² The New Zealand railways, particularly the newer lines, frequently run through a difficult country, where the cost of construction is necessarily high. Also railway construction is conducted on a small scale, a little at a time, and materials are expensive because of remoteness from the industrial centres of the world. Again, the Department of Public Works assists the Department of Labor in finding work for the unemployed, especially in the winter months, and a large part of the work is done by laborers working in co-operative gangs, generally with pick and shovel instead of modern machinery for excavating and grading. Such facts as these largely explain the high cost of construction. Doubtless another reason is that the work is done by a governmental department rather than by private contractors.

Because of the general prosperity of the country, to which the railways of course have contributed, the gross revenue of the system has increased from £1,150,851 in

¹ Year Book of 1908, p. 579.

² New Zealand Railways Statement, 1908.

1895 to £2,761,938 in 1908. The revenue per mile of line has increased from £577 to £1,114, while the revenue per train-mile has increased from 85.75*d.* to 93.75*d.* But the expenditure has increased in still greater proportion: the expenditure per mile of line from £367 to £796, the expenditure per train-mile from 63.62*d.* to 70.59*d.* The gross earnings per train-mile exceed those of all the Australian railways except Victoria, and the expenditure per train mile is greater than that of all of them, without exception.¹ Had it not been for a fall in the rate of interest on government loans since 1895, from 4.1 per cent. to 3.7 per cent., the deficit for 1907–08, figured on the basis of the “capital cost” of the open lines, would have been £184,352 instead of £89,349, as it now is.

The Railways Statement, presented annually to Parliament by the minister for railways, does not recognize the existence of a deficit, but shows a “net profit on working,” so called, without noting that it is always insufficient to pay interest on the cost of construction at the average rate of interest paid by the government on the public debt. In the year ending March 31, 1908, the railways earned a “net profit” of 3.33 per cent. on £24,365,647, the cost of construction of the open lines, but, since the average rate of interest paid on the public debt was about 3.7 per cent., the “net profit” is absorbed in interest payments, and a deficit emerges, amounting to £89,349, if interest is reckoned on the cost of the open lines only. But the real cost of construction of the railway system, on which interest should be reckoned, includes the cost of the unopened lines, making a total of £26,735,140, reducing the “net profit” to 3.04 per cent. and increasing the deficit to £177,021. This is considerably less than the deficits during the administration of the commissioners, which, in their turn, were less than those of their prede-

¹ Railways Statement, 1908, Return No. 15.

cessors, but, as shown above, the reduction has been chiefly due to a fall in the rate of interest, with which the railway administration as such has had nothing to do. Reckoning interest on the cost of the open lines only, as in the table, the total deficit from 1895 to 1908 amounts to £1,134,447; from 1882 to 1908 it is £4,256,025 (\$20,000,000). Taking interest on the cost of the unopened lines as well, the deficit is increased by at least 50 per cent.

Year.	Miles Open.	Capital Cost of Open Lines. ¹	Average Rate of Interest on Public Debt. ²	Interest on Capital Cost.	Revenue.		Expenditure.		"Net Profits on Working."		Deficit.	
					Total Revenue.	Revenue per Train-mile.	Amount.	Per Train-mile.	Per Cent. of Revenue.	Amount.		Per Cent. of Capital Cost.
1881-82	1319	£9,443,000	4.8%	£453,264	£892,026	85.50d.	£523,099	50d.	58%	£368,927	3.9%	£84,337
1882-83	1358	10,478,998	4.8	492,991	963,347	82.00	582,821	51	62	360,526	3.4	132,465
1883-84	1396	11,078,500	4.8	531,768	991,304	81.00	655,990	51	68	309,314	2.7	226,454
1884-85	1477	11,810,194	4.7	556,079	1,045,712	87.00	690,026	54	66	355,686	3.0	199,993
1885-86	1613	12,427,814	4.7	594,397	1,047,419	83.00	690,340	54	66	357,079	2.9	227,028
1886-87	1727	13,017,567	4.7	611,825	998,768	79.50	699,072	56	70	298,696	2.3	312,129
1887-88	1758	13,552,978	4.6	614,236	994,843	81.00	697,328	56	69	307,515	2.3	306,721
1888-89	1777	13,472,875	4.6	619,740	997,615	81.50	687,045	55	65	350,570	2.6	312,170
1889-90	1809	13,899,955	4.6	623,397	1,095,570	81.50	682,787	55	62	412,783	2.9	210,614
1890-91	1842	14,278,356	4.6	642,530	1,121,703	83.00	700,703	56	62	420,998	2.9	221,538
1891-92	1869	14,656,691	4.6	674,207	1,115,432	83.75	706,517	56	63	408,915	3.0	184,044
1892-93	1886	14,733,120	4.3	633,524	1,181,522	84.50	734,142	59	62	449,380	2.9	228,595
1893-94	1943	15,137,036	4.4	666,029	1,172,793	90.25	735,359	57	63	437,434	2.7	210,768
1894-95	1993	15,352,613	4.1	629,459	1,150,851	85.75	732,160	55	64	418,691	2.7	168,122
1895-96	2014	15,425,532	3.9	599,795	1,183,041	85.75	751,368	55	66	431,673	3.2	104,945
1896-97	2018	15,577,392	3.9	608,018	1,286,158	90.00	789,054	56	61	497,101	3.2	104,945
1897-98	2055	15,993,903	3.9	623,762	1,376,065	90.00	857,181	56	62	518,817	3.2	111,845
1898-99	2090	16,404,076	3.8	634,847	1,469,665	89.00	857,181	56	62	518,817	3.2	111,845
1899-1900	2104	16,703,857	3.8	653,878	1,469,665	89.00	857,181	56	62	518,817	3.2	111,845
1900-01	2212	17,207,328	3.8	690,487	1,623,981	93.00	1,052,338	56	65	599,368	3.4	63,314
1901-02	2235	18,170,722	3.8	690,487	1,727,236	88.75	1,127,848	59	65	571,533	3.4	63,314
1902-03	2281	19,081,735	3.8	706,022	1,874,586	88.95	1,127,848	59	67	622,349	3.4	66,138
1903-04	2328	20,692,911	3.8	787,130	2,194,038	87.00	1,343,415	59	68	630,623	3.3	75,399
1904-05	2374	21,701,572	3.7	804,968	2,180,941	91.75	1,438,724	60	68	741,917	3.6	45,213
1905-06	2406	22,498,972	3.8	854,960	2,209,231	86.50	1,492,960	58	69	716,331	3.3	86,627
1906-07	2456	23,504,272	3.7	869,658	2,349,704	87.75	1,621,239	60	69	728,465	3.4	126,495
1907-08	2471	24,365,647	3.7	901,528	2,624,600	93.00	1,812,452	64	69	812,118	3.3	57,540
					2,761,938	93.75	1,949,769	66	71	812,179	3.3	89,349
												£4,256,125

¹ If interest were reckoned on the capital cost of open and unopened lines, as it should be, the annual deficits would be much greater than the amount shown in the table. For the year 1907-08 the capital cost of open and unopened lines was £26,735,140.

² The average rate of interest on the public debt is less than the rate actually paid on the sums realized by the government from the sale of stock. At the present time 4 per cent. stock is floated at about par, and therefore it would be more correct to take 4 per cent. as the rate of interest on the railway debt. Reckoning interest at 4 per cent. on the cost of open and unopened lines the deficit for 1907-8 would be £237,226, and the total deficit since 1881-82 would probably be at least £8,000,000 and possibly £10,000,000.

In explanation of the deficit it should be said that some of the lines, chiefly those in the North Island, earn more than 3.7 per cent. upon the capital cost, and that the bulk of the deficit proceeds from losses on the Hurunui-Bluff section, the main trunk line of the South Island, 1,283 miles in length, of which the net earnings in 1907-08 were only 2.39 per cent. This is the oldest part of the system, being the continuation and linking up of lines begun by the Provinces of Canterbury and Otago. It is probable that the political influence of the South Island, greater formerly than at present, had much to do with the unprofitable railway construction in that part of New Zealand. In the year 1907-08 the revenue per mile on the Hurunui-Bluff section was only £946, while the revenue on the Wellington-Napier-New Plymouth section was £1,600 per mile, and on the Auckland section it was £1,112 per mile. The expenditure per mile was £723 on the Hurunui-Bluff section, £1,085 on the Wellington section, and £756 on the Auckland section. The revenue per train-mile on these three sections was 93.25*d.*, 85.5*d.*, and 90.5*d.*, and the expenditure per train-mile 71.3*d.*, 57.7*d.*, and 61.5*d.*, respectively.¹ Sir Joseph Ward, in a recent speech in Parliament, thus explained the losses on the railway system of the South Island: "In the South Island the haulage to the ports is over comparatively short distances, and competitive rates are in existence in some places, owing to sea competition. On the Wellington-Napier-New Plymouth Section and the Auckland Section the haulage is longer, there is little sea competition, and the lines are newer in comparison with the southern ones. Age brings its troubles to railways as well as to individuals. The pioneer lines have had to be brought up to standard require-

¹ Railways Statement, 1908, Returns 4 and 6. See also various pamphlets by Samuel Vaile.

ments to meet the demands of the business by repairs, additions to structures, bridges and station accommodations. As the North Island lines increase in age they will require more expenditure on repairs than at the present moment, and they will then go through the same process that the southern lines have. . . . When you get anything like the proportion of railway mileage in the North that exists in the South, you will have a very much larger capital invested and very much larger sections over which haulage will go, and the earnings of the whole of the railways in the North will require to be greater than they are now in order to maintain either the present gross or net returns. The disproportion between the revenue and the expenditure will, as the years go on, become equally as marked in the North Island as the honorable member has said it is now in the South Island.”¹

If this is true, the financial prospects of the New Zealand railways are discouraging, and Mr. Vaile and other critics must be largely right in claiming that either “additions to open lines” should be charged to revenue, or there should be a large allowance for depreciation, since the earning power of the whole system is likely to decline as the years go by. But the allowance for maintenance of way and works, as Sir Joseph Ward himself has shown,² is already high, and it is increasing year by year. In 1895 it was £141 per mile of line; in 1908 it was £258, and one would think that this should be sufficient to keep the system in good condition without any allowance for depreciation. In the Railways Statement for 1908 it is stated: “The increased cost of maintenance is very largely due to the policy of betterment that has been followed during the past few years. . . . The lines are in excellent condition, and, in view of the important functions that

¹ New Zealand Parliamentary Debates, vol. 139, p. 664. July 26, 1907.

² Auckland Star, February 17, 1908.

they perform in the development of settlement and commerce of the Dominion, it is essential that the present high standard be maintained.”¹

Another explanation of the deficit that is given by the Government is that great concessions have been given to the public in fares, freights, and train services, and to the railway employees in wages and salaries. Speaking, apparently, of the period between 1895 and 1907, Sir Joseph Ward said: “The concessions given to the public in the matter of fares and freights amounted to £850,000, and the value of the increased train services to £883,000. . . . This takes no account of the concessions in pay given to the railway staff, which amounted to another £375,000.”²

Undoubtedly, wages and salaries have been slightly increased from time to time, to keep pace in a measure with the general increase in wages and cost of living in New Zealand and throughout the world, and this has caused an increase in expenditure, offset, however, by increased revenue, due to the general prosperity of the country. But such increases can hardly be regarded as voluntary “concessions,” or gifts, since even now the railway employees, if one may believe the Amalgamated Society of Railway Servants, and their organ, the *Railway Review*,³ are receiving wages rather less than those paid in private employ, while their hours of labor are frequently much higher than would be tolerated in any private business subject to the jurisdiction of the Arbitration Court. There are only thirty-one officials who receive salaries of £400 (\$2,000) or more. The general manager receives a salary of £1,250 (\$6,200), the chief engineer £900, the chief traffic manager £800, the traffic

¹ *Railways Statement*, 1908, p. vi.

² *Auckland Star*, February 17, 1908.

³ The *New Zealand Railway Review*, a journal devoted to the interests of the New Zealand railway men.

superintendent £650, the chief clerk £500.¹ The most highly paid station master, a man who has been in the service for forty years, receives only £355 (\$1,720). Station masters receive from £170 (\$730) to £355, ordinary clerks from £170 to £300, cadets from £40 to £100, guards from 8s. (\$2) to 10s. (\$2.50) a day, enginemen from 10s. 6d. (\$2.60) to 12s. (\$3) a day, firemen from 7s. 6d. (\$1.85) to 9s. (\$2.25), carpenters from 9s. to 10s. 6d., blacksmiths from 10s. to 12s., common laborers generally 7s. (\$1.75) a day.² Salaries and wages are now slightly higher than they were in 1907, but there is no evidence to show that any material concessions have been made to railway employees. However, they have the advantage of regularity of employment and of retiring allowances under the superannuation system.³

It is equally difficult to see how it can be claimed that any such sum as £883,000 can have been returned to the public in the form of increased train services. The business of the railways has greatly increased, necessitating an increase in train service, but this can hardly be regarded as a gift, since the public presumably pays for what it thus receives, unless the train service is in excess of what the traffic requires. Doubtless unreasonable concessions are constantly demanded by the public, and the department sometimes gives way, but that such concessions can have amounted to the enormous sum above mentioned it is hard to believe.

There is more ground for the statement that concessions have been made in fares and freights, altho it seems as tho the department had greatly overestimated the value of these concessions also. In the year 1895 the average charge per ton of freight carried, exclusive of cattle and

¹ Members of the Railway Department, 1907.

² Members of the Railway Department, 1907.

³ Government Railways Act, 1908.

sheep, was £.333; in 1900 it was £.315; in 1908 it was £.327. These figures do not indicate any great reductions in freights, unless there has been in the same time a considerable increase in the length of haul. In 1895 the average charge per ordinary passenger carried was £.092; in 1896 it was £.068; in 1901 it was £.080; in 1908 it was £.085. Here, again, it is possible that the average distance travelled by each passenger may have increased, and that the charge per passenger-mile may have fallen more than the charge per passenger carried.¹ These figures take no account of considerable reductions in fares for season tickets, designed to develop suburban and tourist traffic, nor of school excursion fares and other minor concessions.

But it is a question how far reductions in fares and freights are to be regarded as "concessions," since they appear to have been for the most part justified from a business point of view by the increase in traffic which they have helped to develop. In 1895 only 2,048,391 tons of freight were carried, exclusive of cattle and sheep; in 1908 4,834,534 tons were carried. In 1895 there were 3,905,578 ordinary passengers; in 1908 there were 9,756,716.² Sir Joseph Ward has frequently said that it would be very easy to extinguish the deficit by increasing railway charges, and that, if required, as much as 10 per cent. could be earned upon the capital cost.³ It is a question, however, whether the Department is not already, in most places, charging all that the traffic can bear, and whether a reduction in rates would not be more productive of net revenue than an increase. Passenger traffic, as is well known, is very responsive to changes in rates. To increase charges on cattle and sheep might cause owners to drive them to market instead of sending them by rail, and even

¹ Railways Statement, 1908, Returns Nos. 5 and 16.

² Railways Statement, 1908.

³ The Auckland Star, February 17, 1908.

a slight increase in rates between points on the seacoast would cause a considerable falling off in traffic. As Sir Joseph Ward also said, in a recent speech at Carterton, "If rates were increased, it would mean that the revenue would be reduced, there would be fewer trains, and a number of hands would be dismissed."¹

As to the claim that net profits of 10 per cent. could be earned by merely increasing charges, it can hardly have been seriously made. The gross earnings in 1908 were not much more than 10 per cent. upon the capital cost, and to produce a net revenue of 10 per cent. it would be necessary to increase the gross revenue, and presumably the fares and freights, by at least 60 per cent., assuming that the traffic and expenditure would remain the same. But such an increase in rates would cause a sharp falling off in traffic, and instead of producing a net revenue of 10 per cent. would probably cause the deficit to increase and greatly injure the country at large. If the Department could increase the charges in certain districts and lower them in others, according to the amount and character of the traffic, it would probably be possible to secure a considerable increase in net revenue, but this would be adopting the practise of differential rating, for which the commissioners were execrated, and which would cause a storm of protest and complaint, with charges of favoritism and the like, such as no democratic government could resist.

The chief causes, then, of the railway deficit, appear to be the following:—

1. The construction of lines in advance of requirements.
2. The high cost of all lines.
3. Delays in the construction of lines that might be profitable, due chiefly to lack of funds.
4. A high cost of maintenance and operation, partly

¹ The Wellington Evening Post, November 5 and 12, 1908

due to a certain lack of discipline, initiative, and effectiveness in the railway service. This will be disputed, and is hard to prove.

5. A rigid system of rates.

6. Unprofitable concessions in service, fares, and freights.

One of the most serious causes of inefficiency and dissatisfaction is the system of promotion. Men are usually promoted merely because their names come first on the list of seniority, unless it can be proved that they are actually incapable, which is difficult. The theoretical right to advance capable men over their seniors is practically never exercised, because of the unpleasantness and difficulty of proving alleged unfitness. Until a system of promotion by merit is introduced, there will never be an efficient service. Yet promotion by merit lends itself readily to favoritism and other abuses. Again, members of the service, even cadets, frequently have political influence back of them, and this interferes seriously with discipline. Also workers in the government shops have frequently been accused of practising the "government stroke." The general manager himself, Mr. T. Ronayne, recently wrote a strong letter to the chief mechanical engineer at the Addington workshops, making serious charges of inefficiency. However, when the commission appointed to investigate the charges met at Christchurch on March 11, 1909, the general manager said that he had been misinformed and that he was perfectly satisfied with the condition of the workshops. Yet in the course of the investigation certain significant facts were brought out, such as the difficulty of getting rid of inefficient men, the difficulty of getting good men when needed, the lack of encouragement to inventors and other good men by promotion and advances in salary, and the lack of up-to-date appliances in certain lines of work.¹

¹ The Wellington Evening Post, January 20 to March 17, 1909.

For these and other causes the New Zealand railways have never earned the full amount of interest on their capital cost. But the Government has frequently declared that it does not wish to make the railways pay. In the Railways Statement for 1905 Sir Joseph Ward says, "The policy of the Government has been throughout to regard the railways as adjuncts to the settlement of the country, and to look upon the earning of a large profit as of minor importance compared with the incalculable benefits that accrue to the State by giving the settlers a convenient and cheap means of transporting the produce of their farms to the markets, and any surpluses which have accrued after the payment of the minimum of 3 per cent. on the capital cost of the lines have been returned to the users of the railways in cheapened freights and increased facilities." More recently Sir Joseph Ward is reported to have said. "The Government has laid down definitely in regard to our railways the policy of returning to the users of the railways all earnings over 3 per cent. That is a clean-cut issue, for which the Government must accept full responsibility."¹ Just why 3 per cent. should be preferred to 3.74 per cent., the average rate of interest now paid upon government loans, or why it would not be as well to earn only 2 per cent., it is difficult to say. But it is not hard to understand how it came to be thought that the railways should be operated primarily for development rather than for profit.

New Zealand was, and is, a new country, with large undeveloped resources, and the people of every district desire roads and railways as a means to one end,—development. To the land-owner, development means enhanced prices for land; to the merchant and manufacturer it means an expanded market for their goods; to the laborer it means high wages, steady employment, and

¹ New Zealand Times, February 17, 1908.

opportunities for advancement, particularly while the developmental works are going on. It was inevitable, then, that emphasis should be laid upon development, social service, and all the present and prospective benefits of public works, rather than upon considerations of cost, which would have operated as a check upon public expenditure, and would have retarded to some extent the speed of economic development. Besides, it was not necessary to pay cash down: it was possible to borrow, and thus shift the burden of cost upon the shoulders of future generations, which would presumably be well able to bear it. Moreover, it was thought by some, notably Sir Julius Vogel, that the railways would sooner or later pay many times over all the cost of construction and all the losses and deficits of their early years.

Hence the people in every part of the country demanded railways, formed associations for the purpose of securing them, elected members to Parliament pledged to do their utmost to that end, and the Government, unable to resist the pressure of public opinion, borrowed as much as it could, and built short, unprofitable bits of line without counting the cost. The land-owners as a class, who were the strongest political force in the colony, were naturally the most eager to have railways built, loudest in their demand for low rates, most intense in their scorn of base commercialism in railway management. The railways might never pay expenses, not to speak of interest on the capital cost, much less contribute to the liquidation of the public debt, but land values would increase, and they themselves would gain in "unearned increments" far more than they had lost in additional taxation.

The question at bottom is one of social utility *versus* social cost, and it must be said that, on the whole, New Zealand has gained more than it has lost by the build-

ing of railways. But it would have gained more and lost less if the people and the Government had laid more stress upon the idea of cost, and had in every case bent their efforts towards securing a maximum of benefit at a minimum of cost. Social benefit and social cost are vague concepts, hard to measure; but they can be measured with some exactness by means of money, and the financial measuring-rod must be applied to them if the people wish to know whether a governmental undertaking is socially advantageous or not. In the case of the school system the cost can be measured, but not the product, for this is non-material, and has no definite market value; and this is the cause, too, of much of the inefficiency that characterizes the school system. But, in the case of railways it is quite possible to measure benefit as well as cost, and to strike a balance of profit or loss in terms of money. If this is not done, there is no exact standard of efficiency and no measure of social benefit other than the vague surmise of some one who thinks that a given undertaking was well worth all its cost.

A district that cannot supply enough traffic to make a railway pay, sooner or later, should not have a railway at all; and if, in spite of the prospective loss, the railway is built, it becomes a parasitic enterprise, drawing sustenance from other parts of the country, which receive no direct benefit and cannot afford to pay for indirect benefits, since they all have their own burdens to bear. Similarly, it is neither economical nor just to make concessions in railway rates or railway service, and cause the resulting deficit to fall upon the tax-payers, unless the tax-payers, in the not too remote future, are going to get their money back. If all the users of the railways are tax-payers, it is a matter of indifference to them whether they pay more taxes or higher rates. For the

sake of sound finance they should pay higher rates. But, if some tax-payers are not, directly or indirectly, users of the railways, then the policy of gratuitous concessions involves making people who do not enjoy the benefits of railway transportation pay for those who do, and who, moreover, are well able to pay for them themselves.

It is said that the country must be developed. But it is neither necessary nor possible to build railways everywhere, and quite possible to spend more in the development of a district than that district deserves or than the country at large can afford.¹ Every district claims what it calls a "fair share" of public expenditure, but can allege no principle of fairness in the distribution of railway expenditure other than the prospect of developing a large population, large wealth, and a profitable traffic. It is not reasonable to expect a new line to pay from the very first, but long-established lines ought to pay, and pay enough to recoup the government for all the losses of earlier years. The idea of making the railways a profitable investment ought ever to be kept in mind as a check upon extravagant expenditure and a guide to further extension. If this is not the test

¹ The case of the Lawrence-Roxburgh Railway is a glaring instance of the waste of public money. It was a political railway, commenced by Seddon during an election four years ago. Since that time many thousands of pounds have been spent, miles of embankment laid out, and some tunnels started, but not a mile of line opened. Of this line Mr. John MacGregor, himself a citizen of Dunedin, says, "The Lawrence line was generally admitted, at the time of its construction, to be a gross political job, but, in spite of that fact, leading citizens of Dunedin defended and even advocated it, just as they are now advocating the extension to Roxburgh, and on the same ground,—the advantage of Dunedin." Mr. MacGregor quotes from a recent speech of one of the Otago members, who said: "For himself, what he desired was to see that Otago got its fair share of the public expenditure. It mattered little to him where the money went so long as that object was secured." (The Evening Post, July 10, 1907, article by John MacGregor.) Quite recently the Government has stopped all work on this line because of lack of funds and because it is not likely that the line will pay. (Evening Post, April 10, 1909.) A great outcry has been raised by the people of Dunedin and the settlers along the projected line, and doubtless the settlers have a serious grievance, but the action of the Government is generally commended in other parts of the Dominion.

of fairness in railway construction, service, and charges, then there is no test other than political influence and the granting of concessions to purchase votes,—a practise that has done great harm in the past and will greatly retard the future development of the Dominion unless the government sternly sets its face against the political control of railways and towards the establishment of sound financial principles in every part of the administration.

Indeed, the financial failure of the railways has been one of the chief causes of the slow growth of railways during the past thirty years. From 1873 to 1878 nearly 1,000 miles of line were built, an average of about 200 miles a year; but in the thirty years from 1878 to 1908 only 1,385 miles were built, an average of only 45 miles a year. This average would be fairly high if the railway system were practically complete and only a few minor extensions had to be made from time to time. But such is not the case. A section of the main trunk line between Auckland and Wellington, about 200 miles in length, has taken twenty-three years to build, altho it was the most important link in the whole system, and promised to develop a large and profitable traffic. "Apart from the fact that this dilatory method of construction has added enormously to the cost, it is appalling to think of the huge sum which the Dominion has paid in interest during construction, to say nothing of the returns which might have been gathered in and the settlement which would have been promoted, had the work been completed with reasonable dispatch."¹

The causes of this delay and loss have been chiefly two. In the first place, the funds available for railway construction have been distributed, not to say frittered away, in various parts of the country, in the building of small

¹ The Press, Christchurch, September 23, 1908

bits of line, instead of being concentrated on one or two important works. This was largely due to political considerations. Secondly, the funds at the disposal of the government were limited, because the government could not advantageously borrow more than a certain amount every year, altho much larger sums were urgently required. If the railways already built had been paying investments, earning the full interest on the capital cost, and, perhaps, a surplus to apply to betterments, a considerable sum now borrowed for "additions to open lines" would have been available for new construction, and it would have been easy to borrow all the money needed for projected lines if only they promised, in their turn, to become paying investments. Thus the districts already supplied with railways, by their narrow and selfish policy, have not only compelled the people who had no railways to contribute to the deficit, but have for years prevented these people from getting railways in districts that could be developed and could supply a profitable traffic.¹

The present Government is aware of these facts, and notwithstanding its own statements to the contrary, which must be regarded as dictated by political expediency, it does desire to make the railways pay. Hitherto public opinion has not been educated up to the point where it would sustain the Government in trying to apply commercial principles to railway management. But, largely because of the keen financial criticism of such men as Mr. Samuel Vaile, of Auckland, supported by the opposition in Parliament and a considerable section of the press,—a criticism severe, perhaps, at times, but salutary,—public opinion is changing, and would now probably support the Government in trying to make the railways a financial success. What Mr. Victor Clark says of Aus-

¹ The Evening Post, November 13, 1908.

tralia, "The bad economy of building non-paying lines is now well understood,"¹ is coming to be true of New Zealand also, and doubtless in the near future the bad economy of non-paying operation, of all sorts of unprofitable concessions, will be equally well understood.

The Government is in a difficult situation. Here an undeveloped district is crying for a railway, there a rich and prosperous population is clamoring for concessions of every kind. On the one hand, the railway servants demand higher wages and shorter hours; on the other, the Department of Labor asks that railway construction be made subordinate to the provision of work for the unemployed. And yet the financial critics expect the railways to pay interest on the capital cost and earn a surplus for "additions to open lines."

Nevertheless, the government is taking a stronger attitude than formerly. Intrenched behind a large parliamentary majority and supported by the criticisms of the opposition, it can afford to refuse the demands of nine-tenths of the petitioners, to accede to which would be to plunge the Dominion into hopeless bankruptcy. Sir Joseph Ward, in a recent speech in the House, made a most effective charge of inconsistency against those members who, in one breath, condemn the Government for extravagant expenditure and, in the next, ask favors of all kinds for their constituencies. He said: "What is the use of any one indulging in what is nothing more or less than colossal hypocrisy, in urging that the Government should keep down the expenditure of loan money, in proclaiming that we have obtained too much loan money, when every honourable member knows that ever since the beginning of the session the Order Paper has been crowded every day with questions asking for new railways, asking for new public buildings, asking for in-

¹ Quarterly Journal of Economics, 1908

creases in salaries and increases in wages of public employees, asking for concessions in getting some of the public utilities services at less than cost price? They are asking for all these things from all parts of the Colony, and then they are talking to their constituencies in the direction of saying that the Government is living on borrowed money. The whole pretence of declaiming against borrowing money and at the same time appealing in other directions for large sums to be expended out of borrowed money is really political hypocrisy."¹

Notwithstanding the large financial losses of the railways, practically nobody in New Zealand proposes private ownership as a remedy. The railways could probably be sold for a sum at least equal to their capital cost, and it is probable that a private company could so operate the lines as to pay interest on the cost of purchase, taxes on its property, and moderate but increasing dividends on its stock. From a merely financial point of view it would probably pay to sell the railways to a private company, which, like the railway companies of the United States and Canada, would do much to develop the varied resources of the country. Or the railways might be leased to a private company, as provided for in the Act,² and in this way the Government might have the burden of interest on the railway debt taken off its hands, and receive in addition a considerable rent for the monopoly which the lessee would receive.

But no such proposal would find favor in New Zealand. Sir George Grey once said in the House, "If we were to sell our railways, we should deal as great a blow at the future prosperity of New Zealand as it would be possible for our greatest enemies to achieve." Even Mr. Vaile is a strong believer in government ownership, and says

¹ Parliamentary Debates, vol. 139, p. 622. July 24, 1907.

² An Act to consolidate and amend the Law relating to the Maintenance and Management of Government Railways, 64 Vict., 1900, Sect. 34.

of his own criticism of the railway administration, "It has been anything but pleasant work for me to write as I have done, for I feel that my exposure of the utter failure of the system in this country will be used against me and I fear that an agitation will arise for the sale of our lines."¹ It would be highly presumptuous in the present writers to say that New Zealanders are wrong in this regard, for, while the sale of the railways to a private company would probably yield good financial returns and further rather than retard the development of the country, the creation of a great monopolistic corporation might introduce a source of corruption new to New Zealand political life, and for this reason, if for no other, the people of the Dominion may well rather bear the ills they have than fly to others that they know not of.

Already there appears to be a strong tendency toward improvement in the railway administration, through the efforts of the Department itself, encouraged by wholesome criticism and suggestion from without.² One of the most interesting suggestions has originated with Mr. Vaile, who has for years devoted much time and thought to railway problems. Mr. Vaile invented the "stage system" of railway rates, in 1882, some years before the introduction of the well-known "zone system" of Hungary. Mr. Vaile's system, however, is the reverse of the Hungarian, which gives better rates to urban than to rural districts, and thus furthers the concentration of population in cities. Mr. Vaile considers that the chief object of railway administration should be to prevent this concentration by distributing population and placing people upon the land. He would accomplish this end by making railway rates in rural districts very low and in urban districts relatively high. The country served

¹ *New Zealand Railway Administration*, by S. Vaile Auckland, 1906.

² *Railway Reform*, a series of articles in the *Evening Post* by A. G. Stephens, beginning January 9, 1909, ending March 3

by any railway would be divided into stages, short stages in thickly settled districts and long stages in the country, and the fares and freight charges would be the same for any stage, long or short. For example, the second-class passenger fare for a stage of 6 miles, from Auckland to Penrose, would be 4*d.* (8 cents, or 1.3 cents per mile), while for the same fare one could travel from Frankton to Te Kuiti, a distance of 41 miles, making only .1*d.* (.2 cent) per passenger-mile. In less-settled districts one might even travel 50 miles for the same fare of 4*d.* The chief effects of this system, as enumerated by Mr. Vaile, would be the distribution of population, the creation of inland trade, a great increase in land values, and a large increase in railway revenue. Apparently, Mr. Vaile does not sufficiently consider the limits to the development of rural traffic and the financial loss which the Department would suffer if it had to carry a small traffic at such exceedingly low rates. New Zealand has not yet suffered much from congestion of population in great cities, but Mr. Vaile's suggestions as to the distribution of population may yet have to be considered, especially in more highly developed industrial countries, where the growth of enormous cities constitutes a serious menace to the future welfare of the human race.¹

Again, it is proposed that the railways be once more placed in the hands of a commission of experts, who, to a large extent independent of political control, may administer the system in a business-like way. The commission that had charge of the railways from 1889 to the end of 1894 has frequently been accused of despotism and inefficiency, but in reality its administration compares very favorably with that which preceded it, and the country gained little or nothing by reverting to direct

¹ *Railways and Social Conditions*, Auckland, 1904; *Social Problems*, Auckland, 1899; *The Railway Problem*, Auckland, 1908, and various other pamphlets by Samuel Vaile.

parliamentary control. The general prosperity of New Zealand and of the world, since 1894, together with the fall in the rate of interest on New Zealand loans, has largely obscured the bad effects of political influence. But they have existed, nevertheless. Certainly, the Australian States, notably Victoria and New South Wales, seem to have benefited greatly by the introduction of the commission form of railway administration. A commission is not, and cannot be, wholly removed from political influence, but it is one step further away from that source of demoralization than a governmental department, with a cabinet minister at its head. A commission can be a good deal more independent than a general manager who derives all of his power from the minister. The chief objections to a commission are that it is too independent, perhaps even despotic, not sufficiently in touch with the people and their needs, too conservative in policy, and liable to all the abuses characteristic of governmental bureaus,—abuses which it is very hard to eradicate.¹ No doubt, the development of the civil service in every country shows a strong tendency towards a rigidity of system, which, like the induration of the arteries in the human body, is a sign of age rather than of youth and vigor, involving a lack of elasticity and adaptability to environment, inevitable, perhaps, but not to be taken as an indication of real progress.

But the prospects of improvement in railway affairs are encouraging. After years of delay the main trunk line of the North Island has been finished, the successful Manawatu line has been purchased, the Government has determined upon a policy of concentration in railway construction, and, best of all, there has been a gratifying change of opinion with regard to the bad economy of building unprofitable lines and the equally bad economy

¹ Vaile, *The Future Control of our Railways*, Auckland, 1893; Parsons, *Story of New Zealand*, chap 31.

of making unprofitable concessions at the expense of the tax-payers and those who have waited long for railways that never come. The new minister for railways, the Hon. J. A. Millar, has definitely abandoned the 3 per cent. policy, and stated in reply to a deputation asking for lower rates that the railways should at least pay interest, and that he did not believe in making the tax-payers pay for the users of the railways.¹ Then, too, the Dominion is rapidly increasing in population and wealth, so that, unless the government goes into the construction of extensive unprofitable lines, the deficit should soon disappear, and there should be a surplus to apply, if not to the reduction of the debt, at least to improving the open lines.

It cannot be sound policy for a country like New Zealand, where the Government does so many things, to allow governmental enterprises to be carried on at a loss. Other countries can afford the luxury of deficits in the postal service and the like, because they merely play at governmental ownership, but to adopt this policy on a large scale would be to start upon the downward path that leads to ruin. Governmental property pays no taxes, and, when there is a deficit, it must fall, sooner or later, upon the tax-payer. Thus, with every extension of governmental activity, taxes would increase, while property subject to taxation would relatively decrease, and the burden would grow until it could no longer be borne. Then it would be clearly seen that the principles of sound private and public finance are essentially the same, and that a profit on public undertakings, the difference between revenue and expenditure, stands for a balance or excess of social utility over social cost.

JAMES EDWARD LE ROSSIGNOL.

WILLIAM DOWNIE STEWART.

¹ *Evening Post*, January 26, 1909.